



Introduct	tion	. 3
	Package Contents Features What is Wireless LAN? Wireless LAN Modes Notes on Wireless LAN Configuration	.4 .5 .6 .7
Hardwar	e Installation	. 9
	System Requirements for the Card Install the PCI Adapter Connecting the Adjustable Antenna to the Card LED Indicators	.9 .9 10 .11
Driver In	nstallation	12
	Driver installation for Windows XP Driver installation for Windows ME Driver installation for Windows 2000 Driver installation for Windows 98	12 14 16 19
Installing	and Using the WLAN Utility	22
	Installation in Windows Using Wireless Utility In Windows XP Using the NetComm NP5420 WLAN Utility In Windows 98/2000/ME	22 24 28
Appendix	x A: FAQ	33
Appendix	x B: Troubleshooting Installing Network Protocols Disabling Windows XP's Wireless Zero Configuration	34 34 34
Appendix	x C: Specifications	36
Appendix	x D: Registering your NetComm Product Trademarks and Notices Warranty Registration Form Product Warranty Limitations of Warranty	36 36 37 39 39



Introduction

Congratulations on your purchase of the NetComm NP5420 11G Wireless PC Card. This PCI card provides you with an innovative wireless networking solution. The NP5420 is easy to set up and use, and with this wireless technology, you can share files and network resources on the network—without inconvenient wires!

The Card is a network Adapter with 54Mbps data rate operating in the ISM band implementing the IEEE 802.11g standard. This Adapter provides Device Drivers for Windows Operating Systems. It also provides tools for the configuration of the Card. The tool, as well as the installation steps of the plug-and-play procedure for the Windows operating systems, is described in this document.

Follow these installation steps to ensure the quick and easy installation of your NetComm NP5420 11G Wireless PC Card:

- **1.** Read the documentation and plan the installation.
- **2.** Install the hardware.
- **3.** Install the drivers.
- 4. Install and use NetComm's WLAN Utility or use Windows XP WLAN utility (XP only).



The following items should be contained in your NP5420:

- NetComm's NP5420 11G Wireless PC Card and external antenna
- NetComm Driver / Utility CD-ROM (a copy of this user's manual included)
- User Guide and Package Contents Note.

If any of the above items are damaged or missing, please contact your dealer immediately.









Features

The NetComm NP5420 11G Wireless PC Card complies with the IEEE 802.11g specification, allowing it to communicate with other wireless devices that support the standard. Features of the NP5420 are:

- 2.4GHz frequency band, which complies with the worldwide requirement
- Wireless interface following the IEEE 802.11g standard
- PCI interface
- Enciphering/deciphering of wireless data by the implementation of the WEP algorithm
- Wire-free access to networked resources beyond the desktop
- Allows users move between Access Points without resetting their connection configuration
- Data rate of up to 54 Mbps
- IEEE802.11g WLAN Card Configuration utility
- External Antenna with LEDs indicating Power and Link
- Supports most popular operating systems



What is Wireless LAN?

Wireless Local Area Network (WLAN) systems offer a great number of advantages over traditional wired systems. WLAN is flexible and easy to setup and manage.

Using radio frequency (RF) technology, a WLAN transmits and receives data through the air. A WLAN combines data connectivity with user mobility. For example, users can roam from a conference room to their office without being disconnected from the network.

Using WLAN, users can conveniently access-shared information, and network administrators can configure and augment networks without installing or moving network cables.

WLAN technology provides users with many convenient and cost saving features:

Mobility:	WLAN provide LAN users with access to real-time information anywhere in their organization, providing service opportunities that are impossible with wired networks.
Ease of Installation:	Installing is easy for novice and expert users alike, eliminating the need to install network cables in walls and ceilings.
Scalability:	WLAN can be configured in a variety of topologies to adapt to specific applications and installations. Configurations are easily changed and range from peer-to-peer networks suitable for a small number of users to full infrastructure networks of thousands of users roaming over a broad area.



Wireless LAN Modes

Wireless LANs can be configured in one of two ways:

Ad-hoc Networking

Also known as a peer-to-peer network, an ad-hoc network is one that allows all workstations and computers in the network to act as servers to all other users on the network.



Users on the network can share files, print to a shared printer, and access the Internet with a shared modem. However, with ad-hoc networking, users can only communicate with other wireless LAN computers that are in the same wireless LAN workgroup, and are within range.

Infrastructure Networking

Infrastructure networking differs from ad-hoc networking in that it includes an access point. Unlike the ad-hoc structure where users on the LAN contend the shared bandwidth, on an infrastructure network, the access point can manage the bandwidth to maximize its utilization.



Additionally, the access point enables users on a wireless LAN to access an existing wired network, allowing wireless users to take advantage of the wired networks resources, such as Internet, email, file transfer, and printer sharing.



Infrastructure networking has the following advantages over ad-hoc networking:

Extended range:	Each wireless LAN computer within the range of the access point can communicate with other wireless LAN computers within range of the access point.
Roaming:	The access point enables a wireless LAN computer to move through a building and still be connected to the LAN.
Wired to wireless LAN connectivity:	The access point bridges the gap between wireless LANs and their wired counterparts.

Notes on Wireless LAN Configuration

When configuring a wireless LAN (WLAN), be sure to note the following points:

- Optimize the performance of the WLAN by ensuring that the distance between access points is not too far. In most buildings, WLAN Adapters operate within a range of 10 ~ 30 metres, depending on the thickness and structure of the walls.
- Radio waves can pass through walls and glass but not metal. If there is interference in transmitting through a wall, it may be that the wall has reinforcing metal in its structure. Install another access point to circumvent this problem or try moving your existing access point.
- Floors usually have metal girders and metal reinforcing struts that interfere with WLAN transmission. It is recommended that you use at least one access point for each level of your building.



Hardware Installation

This section gives detailed instructions for connecting your NB5420 to a PCI slot of a desktop computer.

System Requirements for the Card

- Operating System: Microsoft Windows 98/ME/2000/XP
- Desktop computer with a CD-ROM drive
- One free PCI slot
- Pentium-Class 90MHz or higher

Install the PCI Adapter

- NOTE: These instructions apply to most desktop computers. For detailed information on inserting a PCI Adapter into your desktop computer, consult the desktop computer User's Manual.
- 1. Turn off the computer, unplug the power cord and remove the computer's cover.
- 2. Pick a free PCI expansion slot and remover the protective bracket.



- 3. Insert the Card into the slot until it is fully seated.
- 4. Secure the Card bracket with the screw from step 2.
- 5. Replace the computer's cover.
- 6. Reconnect the power cord and turn on the computer.



Connecting the Adjustable Antenna to the Card

After installing the Card on computer, connect external Antenna to the Card from the SMA connector. Hold the antenna in the desired orientation and then turn the lock nut clockwise until snug (do not over tighten the nut). To adjust the antenna direction, turn the nut counter clockwise one full turn, adjust the antenna and then tighten the nut.



After hardware installation is completed, please go to the Driver Installation section and follow the instructions for your operating system.

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LED Indicators

The following table describes the meaning of LED indicators:





The following sections cover the installation of the NetComm NP5420 WLAN PCI Card driver in Windows Operating Systems.

Note: You have to install your hardware first before you begin to install the drivers.

Driver installation for Windows XP

Follow the steps below to install the NP5420 11G Wireless PC Card drivers for Windows XP.

- 1. Insert the NP5420 into a spare PCI slot in your desktop PC. (Refer to the section on Hardware installation for instructions.)
- 2. After Windows XP detects the NP5420, the Found New Hardware Wizard window appears. Select **Install the software automatically [Recommended]** and insert the driver CD-ROM into CD-ROM drive and click **Next** to continue.



3. The following screen will appear. Click Continue Anyway to continue the installation.





4. The Windows has finished installing software for the device. Click **Finish** to complete the installation



The system will start to install the Wireless LAN Utility. Proceed to the section on Installing and Using the Wireless Utility for information on installation and configuration.



Driver installation for Windows ME

Follow the steps below to install the NP5420 11G Wireless PC Card drivers for Windows ME.

- 1. Insert the NP5420 into a spare PCI slot in your desktop PC. (Refer to the section on Hardware installation for instructions.)
- 2. After Windows ME detects the NP5420 11G Wireless PC Card, the Add New Hardware Wizard window appears. Select **Automatic search for a better driver (Recommended)** and insert the driver CD-ROM into CD-ROM drive and click **Next** to continue.

Add New Hardware Wiz	ard
	Windows has found the following new hardware: PCI Network Controller Windows can automatically search for and install software that supports your hardware. If your hardware came with installation media, insert it now and click Next. What would you like to do? (automatic search for a better driver (Recommended)) (specify the location of the driver (Advanced))
	< Back. Next > Cancel

3. The system will find the setup files and follow the instruction to copy files to your hard disk. The following screen will appear when the software installation has finished. Click **Finish** to complete the installation.



4. The following screen will ask you to restart your computer to finish the hardware setting up. Click **Yes** to reboot the system.





After system reboot, the Wireless LAN Utility will be installed automatically. Proceed to the section on Installing and Using the Wireless Utility for information on installation and configuration.

NOTE: In most cases, Windows will automatically copy all of the files needed for networking. If Windows asks you for the files and prompts you to input the path to the files. Follow the instructions on your screen, and then click OK to continue.



Driver installation for Windows 2000

Follow the steps below to install the NP5420 11G Wireless PC Card drivers for Windows 2000.

- 1. Insert the NP5420 into a spare PCI slot in your desktop PC. (Refer to the section on Hardware installation for instructions.)
- 2. After Windows 2000 detects the NP5420 11G Wireless PC Card, the Found New Hardware Wizard window appears. Click **Next** to start the installation.



3. A screen appears prompting you to select an installation method. Select **Search for a suitable driver for my device (recommended)** and click **Next** to continue.

ind New Hardware Wizard			
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.			
This wizard will complete the installation for this device:			
P Network Controller			
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.			
What do you want the wizard to do?			
 Search for a suitable driver for my device (recommended) 			
O Display a list of the known drivers for this device so that I can choose a specific driver			
<u>≺B</u> ack <u>N</u> ext≻ Can	icel		



4. Ensure that the CD-ROM driver is selected and insert the driver CD-ROM into your CD-ROM drive. Click **Next** to continue.

Found New Hardware Wizard			
Locate Driver Files Where do you want Windows to search for driver files?			
Search for driver files for the following hardware device:			
Network Controller			
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify			
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.			
Optional search locations:			
Floppy disk drives			
CD-ROM drives			
Specify a location			
Microsoft Windows Update			
< <u>₿</u> ack <u>N</u> ext> Cancel			

5. The following screen appears showing the driver search result. Click **Next** to continue the installation.

ound New Hardware Wizard			
Driver Files Search Results The wizard has finished searching for driver files for your hardware device.			
The wizard found a driver for the following device:			
NetComm NP5420 - 11G Wireless PCI card			
Windows found a driver for this device. To install the driver Windows found, click Next.			
k:\w64gt.inf			
The wizard also found other drivers that are suitable for this device. To view a list of these drivers or install one of these drivers, select the following check box, and then click Next.			
Install one of the other drivers			
< <u>B</u> ack <u>N</u> ext> Ca	ncel		



6. The following screen appears. Click Yes to continue



7. The Windows has finished installing software for the device. Click **Finish** to complete the installation.

Found New Hardware Wizard			
Found New Hardware Wizard Completing the Found New Hardware Wizard Automatic Structure Vindows has finished installing the software for this device.			
	< <u>B</u> ack [Finish] Cancel		

The system will start to install Wireless LAN Utility. Proceed to the section on Installing and Using the Wireless Utility for information on installation and configuration.



Driver installation for Windows 98

Follow the steps below to install the NP5420 11G Wireless PC Card drivers for Windows 98.

- 1. Insert the NP5420 into a spare PCI slot in your desktop PC. (Refer to the section on Hardware installation for instructions.)
- 2. After Windows 98 detects the NP5420 11G Wireless PC Card, the Add New Hardware Wizard window appears. Clicks **Next** to continue the installation.



3. A screen appears prompting you to select an installation method. Select **Search for the best driver for your device.** (Recommended) and click Next to continue.





4. Ensure that the CD-ROM drive is selected. Insert the driver CD-ROM into your CD-ROM drive and click **Next** to continue.

Add New Hardware We	And Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations: Click Next to start the search. Eloppy disk drives CD-ROM drive Microsoft Windows Update Specify a Jocation: Browsen.
	< Back Next > Cancel

5. The following screen appears showing the driver search result. Click **Next** to continue the installation.



6. Windows 98 copies files to your hard disk. The following screen will appear to inform you when the software installation has finished. Click **Finish** to complete the installation.





7. The following screen will ask you to restart your computer to finish the installation. Click **Yes** to reboot the system.



After system reboot, the Wireless LAN Utility will be installed automatically. Proceed to the section on Installing and Using the Wireless Utility for information on installation and configuration.

NOTE: In most cases, Windows will automatically copy all of the files needed for networking. If Windows asks you for the files and prompts you to input the path to the files. Follow the instructions on your screen, and then click OK to continue.



Installing and Using the WLAN Utility

The following sections cover the NetComm NP5420 WLAN Utility installation and configuration.

Installation in Windows

After you have installed the driver, the system will start to install the NetComm NP5420 WLAN Utility. Please follow the steps below to install the utility.

1. Once you see the following screen, click **Next** to continue.



2. The screen will show you the default destination chosen by the utility. Click **Next** to continue or click the **Browse** button to select an alternate destination.

InstallShield Wizard	×
Choose Destination Location Select folder where Setup will install files.	
Setup will install NetComm NP5420 WLAN PCI Card Setup in the following folder.	
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.	
Destination Folder F:VProgram Files\Wireless\54Mbps WLAN PCI Card Browse Instal/Shield <u>KBack Next></u> Cancel]

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3. The following screen allows you to review and change the settings before completing the installation. Click **Next** to continue or click **Back** to review or change any settings.

InstallShield Wizard		×	
Start Copying Files Review settings before copying files.		Nº2	
Setup has enough information to start copying change any settings, click Back. If you are sa copying files.	the program files. If you want to r tisfied with the settings, click Next	eview or to begin	
Current Settings:			
The following items are copied: NetComm NP5420 WLAN PCI Card Configuration Utility NetComm NP5420 WLAN PCI Card Device Driver			
The Setting of NetComm NP5420 WLAN PCI Operating mode : Infr ESSID : any	Card are as following: astructure Mode		
त		V	
InstallShield			
	< Back	Cancel	

5. Windows has finished installing Wireless LAN Utility. Click **Finish** to finish the installation.





Using Wireless Utility In Windows XP



Wireless LAN Utility

There are two ways to configure the NetComm NP5420 11G Wireless PC Card. One is using the NetComm NP5420 WLAN Utility; the other one is using Windows XP's Wireless Network Configuration. Once your NP5420 card is installed and your operating system has drivers loaded you must configure a WLAN Utility to specify the correct settings to join your Wireless LAN. Windows XP comes with a built-in WLAN utility, you can choose to use the XP utility or use NetComm's utility as provided on the CD-ROM. Windows 98/ME/2000 installations will need to use the NetComm utility.

Note: You must use only one of these utilities at any one time to manage the operation of the card if you are having trouble disabling the Windows XP WLAN utility see the trouble shooting section for more information. If you wish to always use the Windows XP WLAN utility you should move the shortcut for the NetComm utility from the Startup section of your Start menu to your desktop - this will prevent the NetComm Utility from launching when Windows is started.

Using Windows Wireless Network Configuration

1. Click the right key of the mouse on the Wireless LAN Utility icon and select **Exit** from the pop-up menu.

Show Config	Utility		
Exit			MARKA
	37 X -	6	1:37 PM

2. Click on the Windows Wireless Network Configuration icon.



3. The Connect to Wireless Network window will appear. Click on the Advanced button.

Connect to Wireless Network
The following network(s) are available. To access a network, select it from the list, and then click Connect.
Available <u>n</u> etworks:
i wlan
This network requires the use of a network key (WEP). To access this network, type the key, and then click Connect.
Network <u>k</u> ey:
If you are having difficulty connecting to a network, click Advanced.
Advanced Connect Cancel



4. Make sure "Use Windows to configure my wireless network settings" has been selected, and then click **OK** button.

- Wireless Network Con	nection 6 Pro	operties 💦 🛛 🔀
General Wireless Networks	Authentication	Advanced
Use Windows to configur	e my wireless nel	twork settings
To connect to an available	network, click 0	Configure.
å WLAN	<u>^</u>	<u>C</u> onfigure
Automatically connect to a below:	vailable network:	s in the order listed
		Move down
Add Remo	ve Pt <u>o</u> pe	rties
Learn about <u>setting up wire</u> configuration.	ess network	Advanced
		K Cancel

5. Click the Windows Wireless Network Configuration icon again to open the Connect to Wireless Network window.

Connect to Wireless Network 🛛 🔋 🔀					
The following network(s) are available. To access a network, select it from the list, and then click Connect.					
Available networks:					
This network requires the use of a network key (WEP). To access this network, type the key, and then click Connect.					
Network <u>k</u> ey:					
If you are having difficulty connecting to a network, click Advanced.					
Advanced Cancel					

- 6. Select an available network and click **Connect** button.
- 7. The Windows Wireless Network Configuration has been enabled.





8. Click Properties to start Windows Wireless Network Configuration.

Y Wireless Network Conne	ction 9 Status 👘 🛛 🔀
General Support	
Connection	
Status:	Connected
Duration:	01:01:59
Speed:	11.0 Mbps
Signal Strength:	°
Activity Sent —	- Received
Packets: 3	29 14
Properties Disable	

Using the NetComm NP5420 WLAN Utility (for Windows XP only)

1. Exit NetComm's Wireless LAN Utility.



2. Double click Windows Wireless Network Configuration icon.



3. Click Advanced button.

Connect to Wireless Network
The following network(s) are available. To access a network, select it from the list, and then click Connect.
Available networks:
i WLAN
This network requires the use of a network key (WEP). To access this network, type the key, and then click Connect.
Network <u>k</u> ey:
If you are having difficulty connecting to a network, click Advanced.
Advanced Connect Cancel



4. Disable "Use Windows to configure my wireless network settings" and click **OK** button.

🕹 Wireless Network Con	nection 6 Properties 👘 🕐	×
General Wireless Networks	Authentication Advanced	
Use Windows to configur	e my wireless network settings	
To connect to an available	e network, click Configure.	
i WLAN	Configure	
	- Refresh	
		4
Automatically connect to a below;	vailable networks in the order listed	
	Move <u>up</u>	
	Move <u>d</u> own	
Add Remo	ve Properties	
Learn about <u>setting up wire</u> configuration.	less network Adyanced	ו
	OK Cancel	

- 5. Select Start -> All Programs -> 54Mbps WLAN WLAN PCI Card then click NetComm NP5420 WLAN Utility to start the Wireless LAN Utility.
- 6. The Wireless LAN Utility will be enabled.



7. Click **Re-Scan** button to start Wireless LAN Utility. (Refer to Configuring the CardBus Wireless LAN Card.)

54Mbps WLAN Card Configuration Utility	X
Link Info Configuration Site Survey Encryption About	
State Scanning	
Current Channel Re-Scan	
Current Transfer Rate Mbps	
Current Service Set Identifier	
Tx/Fx(Total Frames) Transmitted Feceived	
Link Quality:	
Signal Strength:	
OK Cancel Help	



Using the NetComm NP5420 WLAN Utility In Windows 98/2000/ME



Wireless LAN Utility icon



Meaning

Green indicates a connection is linked to a wireless network.

Red indicates that the wireless LAN card is looking for an available access point.

Double-click the icon to open the Wireless LAN Utility.

Configuring the NP5420 11G Wireless PC Card

Link Info

This screen shows you the status of your current connection.

54Mbps WLAN Card Configuration Utility	X
Link Info Configuration Site Survey Encryption About	
State Connected - BSSID = 00-06-25-04-7A-7C	
Current Channel 1 Re-Scan	
Current Transfer Rate 11 Mbps	
Current Service Set Identifier Iinksyss	
Tx/Rx(Total Frames) Transmitted Table Feceived Table Feceived Table Feceived Feceived F	
Link Quality: Good (40%)	
Signal Strength: Good (46%)	
OK Cancel Help	

Click **Re-Scan** to search for wireless connection (the Card will search for the connection automatically when it is activated).



Configuration

54Mbps WLAN Card Configuration Utility
Link Info Configuration Site Survey Encryption About
Profile-
Default Remove Create Activate
Configuration
Operating Mode Infrastructure
(SSID)
Channel 6
Power Saving Mode Disabled
Hestore Defaults Undo Changes Apply Changes
OK Cancel Help

The profile setting allows you to save configurations in different profiles for different working environments. The default profile will contain the initial configuration setting when you install the Card.

Under the Operating Mode drop-box, you may choose either Infrastructure or Ad-Hoc. The Infrastructure mode allows a wireless adapter to communicate with a wired network employing an Access Point, while the Ad-Hoc mode allows wireless-to-wireless, peer-to-peer communication.

If you choose Infrastructure, the SSID should have the same name as the Access Point. If you choose Ad-Hoc, all clients should share the same SSID name and channel. When using Infrastructure mode you do not need to specify channels as the NP5420 adapter will select the appropriate channel when it finds an access point with the same SSID. If two access points are broadcasting the same SSID they should be on different channels (preferably 2 or more apart) and their range should partially overlap to avoid 'black spots'.



Under Power Saving Mode, you can select

Enabled to allow your adapter to go to sleep mode while the Card doesn't proceed the data transmission. Or select Disabled to make the Card never go to sleep mode.

Click Apply to save the settings.



Site Survey

Mbps WLAN Card I Link Info Configural The list contains a update the list, clic Access Point from the specified Acce	Configuration Utility ion <u>Site Survey</u> Enc wailable Access Points a % 'Search' button, You o the list, and click 'Conn sss Point.	ryption and their can selec ect' butto	About eatures. Ti t a desired n to conne	≥ o not to
ESSID	BSSID	Signal	Channel	WE 🔺
finksys 1	02-00-3C-AE-B7-33	71%	1	Ye
linksys	00-02-DD-85-12-19	24%	6	No
WLAN_T7	00-E0-92-11-07-01	22%	4	No
V3	00-06-25-C6-FA-25	44%	6	No
linksys	00-06-25-89-5D-41	n/a	6	No
joanne052001	22-77-22-77-FF-FF	26%	1	No
linksys 1	02-00-39-5A-B2-C7	93%	1	Ye
linksvss	00-06-25-04-7A-7C	46%	1	Ye
	Search	Connect		
		Canaa		Halo

The list on the adjacent screen shows you available Access Points and their features. Click on the desired Access Point, then click **Connect** to connect or **Search** to search for more Access Points.

Click **OK** when you are finished.



Encryption

ink Info	Configur	ation S	ite Survey	Encryp	tion Abo	out	
Your er comput	ncryption s er will be i	ettings m unable to	ust match l communic	those of ate.	your netw	ork, or your	
	Enc	ryption (N	VEP) Disa	abled	-		
	Key Entry Create wit	h Passpł	Dise 64 B 128	abled Bits Bits			1
e	Vianual Er	e I	E AS	DII			
	Key 1 📔	*****	*****	×			
	Key 2 🔤	******	******	8			
	Key 3 📔		*******	ж			
1	Key 4 🔤	нинининин	ининининини	н			
	Default Tx	Key 1	Ŧ				
E	lestore De	faults	Undo Ch	anges	Apply C	hanges	

Under the drop-box, you can choose to have WEP encryption Disabled, 64-Bit, or 128-Bit. Wired Equivalent Privacy (WEP) is an encryption scheme used to protect wireless data communication. The Disabled setting prevents the sharing of data with other computers on the WEP network. For data sharing to be enabled, select the level of encryption desired, either 64 or 128-bit.



About

The "About" tab shows you copyright and version information about the driver, the configuration utility, and the firmware.

54Mbps WLAN Card Configuration Utility	×
Link Info Configuration Site Survey Encryption About	
Copyright 2003, All rights reserved. 54Mbps WLAN Card Configuration Utility	
Driver	
Version: 1.0.11.29	
Configuration Utility Version: 3.0.6.256	
NIC Firmware	
Version: 1.00.00.00	
OK Cancel	Help



Appendix A: FAQ

1. What is IEEE 802.11 standard?

The IEEE 802.11 is a wireless LAN industry standard, and the objective of IEEE 802.11 is to make sure that different manufactures' wireless LAN devices can communicate to each other.

2. What is WEP?

As described in the IEEE 802.11 standard, WEP (Wired Equivalent Privacy) is a data privacy mechanism based on a 40 bit shared key algorithm.

3. My desktop PC cannot recognize the Wireless Network PCI Adapter.

Please make sure that the Card is inserted into the PCI slot of your desktop PC properly (check this when the PC is powered off).

And also make sure that the PCI controller is enabled in the BIOS of your desktop PC.

Try installing the card in a different PCI slot.

4. In Infrastructure mode, my desktop PC cannot communicate with the others PCs on the network.

First, make sure that the SSID is same as the others PC.

Check if the WEP is enabled on the Access Point, if it is, set your Adapter's WEP the same as the Access Point.

Also check the Access Point's Authentication Type and Preamble Type and match those settings.

5. In ad-hoc mode, my desktop PC cannot communicate with the others PCs on the network.

Make sure the SSID and the Channel number are the same as other wireless stations.

Check if WEP settings are the same in all wireless stations.

Check the Network Properties, make sure proper protocol is installed and File and Printer Sharing is enabled.



Appendix B: Troubleshooting

Installing Network Protocols

Protocols are necessary for computers to be recognized on your network. Windows 2000 users need to check their Windows User Guides for protocol installation.

Installing the Network Protocols for Windows 98 and Millennium

- 1. From the **Start** Menu, select **Settings** and bring up the **Control Panel**. From the **Control Panel**, double-click on the **Network** icon.
- Note: Before adding any network protocols, verify that the protocol is not already installed. Never install duplicate protocols.
- 2. Select NP5420 11G Wireless PC Card from the list and click the Add button.
- 3. Highlight **Protocol** and click the **Add** button.
- 4. Select Microsoft from the list of "Manufacturers" and TCP/IP from the list of "Network" Protocols" and click the **OK** button to finish the installation.

Disabling Windows XP's Wireless Zero Configuration

You may need to disable Windows XP's Wireless Zero Configuration service if you are having connection issues with the NetComm NP5420 11G Wireless PC Card.

- Note: Before continuing, please ensure that you are logged in as Administrator or have administrator privileges on your computer.
- 1. From the Windows XP **Start** menu, select **Control Panel**. If your Control Panel window is in *Category View*, click on **Switch to Classic View** before continuing.
- 2. Double click on the Administrative Tools icon.



The Administrative Tools screen will appear, double click on the Services icon.





3. Once the Services window has loaded, scroll down until you see the "Wireless Zero Configuration" entry.

Services							
File Action View	Help						
← → 💽 🗗 🖸	1 🖪 😭 🕨 = 🗉 🖦						
ද්දීය Services (Local)	👋 Services (Local)	2					
	Wireless Zero	Name V	Description	Status	Startup Type	Log On As	^
	Configuration	Workstation	Creates an Provides p	Started	Automatic Manual	Local System Local System	
	Stop the service Restart the service	Wireless Zero Confi Windows Time Windows Managem	Provides a Maintains d Provides a Instals, re	Started Started Started	Automatic Automatic Automatic Manual	Local System Local System Local System	3
	Description: Provides automatic configuration for the 802.11 adapters	Windows Inscaler Windows Inscaler Windows Audio WebClient Volume Shadow Copy	Provides im Manages a Enables Wi Manages a Manages s	Started Started Started Started	Manual Automatic Automatic Manual Automatic	Local System Local System Local System Local System Local System	

Double click on Wireless Zero Configuration to bring up the following properties page.

Wireless Zero Co	onfiguration Properties (Local Computer) ? 🗙				
General Log On	Recovery Dependencies				
Service name:	WZCSVC				
Display name:	Wireless Zero Configuration				
Description:	Provides automatic configuration for the 802.11				
Path to executab	le:				
C:\WINDOWS\S	ystem32\svchost.exe -k netsvcs				
Startup type:	Disabled				
Service status: Start You can specify t from here. Start parameters:	Started Stop Pause Resume he start parameters that apply when you start the service				
	OK Cancel Apply				

4. Set the **Startup Type** to "Disable" and then click the **Stop** button.

The service will be stopped by Windows. Once this is complete, click on the **OK** button at the bottom of the window.

- 5. Now, click the x in the top right hand corner of the **Services** window to close it. Once this is done, click the x in the top right hand corner of the **Administrative Tools** menu.
- 6. You have now finished disabling the Wireless Zero Configuration service for Windows XP. To use your NetComm Wireless device you must now run the NetComm Configuration tool.



Appendix C: Specifications

Standards:	IEEE 802.11g				
	PCI Local Bus 2.1 Compliance				
Channels:	11 Channels (US, Canada)			
	13 Channels (Europe)				
	14 Channels ((Japan)			
Antenna:	Dipole antenna with reversed SMA Connector				
Frequency:	2.4 to 2.4835GHz (Industrial Scientific Medical Band)				
Data Rate:	up to 54Mbps				
Operating Ranges:	Indoor (varies depends on the environment):				
	Up to 50M @ 11Mbps				
	Up to 30M @ 54Mbps				
	Outdoor (varies depends on the environment): Up to 150M @ 11Mbps				
	Up to 90M @ 54Mbps				
Temperature:	Operating:	0° ~ 55° C			
	Storage:	-25° ~ 70° C			
	Humidity:	10% to 90% (non-condensing)			

Appendix D: Registering your NetComm Product

To ensure that the conditions of your warranty are complied with, please go to the NetComm web site for quick and easy registration of your product at

www.netcomm.com.au

Alternatively, you can complete the Warranty Registration Form on the following page and mail it to NetComm Limited, PO Box 1200, Lane Cove NSW 2066.

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Please note that the images used in this document may vary slightly from those of the actual product. Specifications are accurate at the time of the preparation of this document but are subject to change without notice.

Warranty Registration Form

Cut along the line

Date of Purchase
Name
Company
Address
Post Code
Tel No() Fax No()
E-mail
The following information is vital for your warranty
Please make sure it's correct and complete.
Serial No
Model
Product Type: Make sure
PC Card External you fill this
Internal Other Section in!
I intend to use this product at:
Home School/College/University
Business Government Office
Dealer's Name
Dealer's Name
Dealer's Name Dealer's Address
Dealer's Name Dealer's Address < Post Code Tel No ()
Dealer's Name Dealer's Address
Dealer's Name Dealer's Address



Product Warranty

The warranty is granted on the following conditions:

- 1. This warranty extends to the original purchaser (you) and is not transferable;
- 2. This warranty shall not apply to software programs, batteries, power supplies, cables or other accessories supplied in or with the product;
- The customer complies with all of the terms of any relevant agreement with NetComm and any other reasonable requirements of NetComm including producing such evidence of purchase as NetComm may require;
- 4. The cost of transporting product to and from NetComm's nominated premises is your responsibility; and,
- 5. NetComm does not have any liability or responsibility under this warranty where any cost, loss, injury or damage of any kind, whether direct, indirect, consequential, incidental or otherwise arises out of events beyond NetComm's reasonable control. This includes but is not limited to: acts of God, war, riot, embargoes, acts of civil or military authorities, fire, floods, electricity outages, lightning, power surges, or shortages of materials or labour.
- 6. The customer is responsible for the security of their computer and network at all times. Security features may be disabled within the factory default settings. NetComm recommends that you enable these features to enhance your security.

The warranty is automatically voided if:

- 1. You, or someone else, use the product, or attempts to use it, other than as specified by NetComm;
- The fault or defect in your product is the result of a voltage surge subjected to the product either by the way of power supply or communication line, whether caused by thunderstorm activity or any other cause(s);
- 3. The fault is the result of accidental damage or damage in transit, including but not limited to liquid spillage;
- 4. Your product has been used for any purposes other than that for which it is sold, or in any way other than in strict accordance with the user manual supplied;
- 5. Your product has been repaired or modified or attempted to be repaired or modified, other than by a qualified person at a service centre authorised by NetComm; and,
- 6. The serial number has been defaced or altered in any way or if the serial number plate has been removed.

Limitations of Warranty

The Trade Practices Act 1974 and corresponding State and Territory Fair Trading Acts or legalisation of another Government ("the relevant acts") in certain circumstances imply mandatory conditions and warranties which cannot be excluded. This warranty is in addition to and not in replacement for such conditions and warranties.

To the extent permitted by the Relevant Acts, in relation to your product and any other materials provided with the product ("the Goods") the liability of NetComm under the Relevant Acts is limited to, at the option of NetComm to:

- Replacement of the Goods; or
- Repair of the Goods; or
- Payment of the cost of replacing the Goods; or
- Payment of the cost of having the Goods repaired.

All NetComm ACN 002 490 486 products have a standard 12 months warranty from date of purchase. However some products have an extended warranty option (refer to packaging). To be eligible for the extended warranty you must supply the requested warranty information to NetComm within 30 days of the original purchase by registering on-line via the NetComm web site at www.netcomm.com.au.

NetComm reserves the right to request proof of purchase upon any warranty claim.

Cut the cable and let your PC go wireless

Add the latest Wi-Fi wireless functionality to your desktop PC with this top-rating NetComm Wireless Networking Adaptor.

As more networks choose the ease and flexibility of wireless, your desktop PC can join in the fun – simply by slotting in this fully compatible, highly secure NetComm Wireless Networking Adaptor.

Wi-Fi compatibility means you can connect to and work in harmony with any other 802.11g or 802.11b wireless device, including routers, Wireless Access Points, laptops with wireless built in, and other Wireless Adaptors.

Installation is straightforward. With full PCI 2.2 compatibility, the Adaptor just slips into a vacant PC slot in your PC. And with driver support for Windows[®] XP, 2000, Me and 98, you'll be up and wireless in no time at all.



NetComm is the name Australians trust for reliable data communications. Only NetComm develops its products specially for Australian conditions, making NetComm the first choice for quality and reliability. Listed on the Australian Stock Exchange (ASX: NTC), NetComm is Australia's on the Australian Stock Exchange (ASX: NTC).

own data communications and networking solutions provider. For more information on this and other NetComm products, please visit www.netcomm.com.au

CHECK THESE GREAT BENEFITS

- Place your PC anywhere within the wireless range no need for cables
- Communicate with wireless-enabled laptops
- Enjoy the security of 128-bit WEP, encrypting your data as it moves around the network
- Set it up yourself with NetComm's plain English installation Guide
- Set and forget full Wi-Fi compliance means you can just enjoy your wireless capability without having to worry about resetting or compatibility issues

FULL OF TOP FEATURES

- Compatible with Wi-Fi IEEE 802.11g and IEEE 802.11b standards for wireless Ethernet at up to 54Mbps
- Dynamic data rate scaling at 54, 11, 5.5, 2 and 1Mbps
- Automatic data rate switching for maximum reliability, throughput and connectivity
- The latest 128-bit WEP encryption ensures the security of your data
- 32-bit PCI interface means outstanding performance and reliability
- Complete with drivers for Windows[®] 98, 2000, ME and XP
- Removeable high-gain antenna

3 YEAR WARRANTY*

1 year warranty out of the box. Extra 2 years FREE with online registration at www.netcomm.com.au *Conditional upon registration online.

UNUNIT. AUSTRALIA CONNECTS WITH

Product Code: NB5420

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